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ABSTRACT

During the past 10 years, the patterns of degree awards in education have departed from the general trends in degree awards from higher education institutions. A decline in the number of bachelor's degrees, accompanied by continuing increases (then a decline) at the master's level, may reflect several factors: shifts in the supply and demand for teachers; higher salaries paid to teachers with graduate degrees; a shift of the preferred teacher credentials from the bachelor's to the master's level; or combinations of these factors. The large increase in doctoral degrees earned during this period suggests considerable change in emphasis within the discipline. This paper presents a profile of the discipline, as it is reflected in degree awards, and the institutions which confer them. The profile places education in the larger context of higher education disciplines, and, within the discipline, it identifies change, stability, and current status. Data are summarized on earned degrees from a variety of perspectives, and trend information is assembled on awards by level, recipients, specialties, and institutions. While not describing the entire active profession of educational researchers, a primary source of new entrants to the discipline is considered, and the environment within which much educational research is conducted is described. (JD)

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GRADUATE STUDY IN EDUCATION=
An Analysis of Institutions and
Degree Awards, 1971 to 1981

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During the last 10 years, the patterns of degree awards in the discipline of education have changed markedly, departing from the trends in degree awards from higher education institutions generally. These distinctive trends raise questions about the possible changing nature of the discipline and the reasons for which degrees are sought, earned, and used. The effects these changes may have on the practice of the discipline in general and on educational research in particular remains to be seen.

A decline in the number of degree awards at the bachelor's level, accompanied by continuing increases (then a lagged decline) at the master's level may reflect several factors: responsiveness of students to widely discussed shifts in the supply of and demand for teachers; the higher salaries customarily paid to teachers with graduate degrees; a shift of preferred teacher credentials from the bachelor's to the master's level (possibly enhanced by the supply and demand situation); combinations of these factors; or other underlying forces. The large increase in doctor's awards during this period, when considered in detail, suggests considerable change in emphasis within the discipline. Contributing factors may, again, be a need for credentials for many positions in the discipline; a shift in research preparation away from methodology and towards applied fields; lessening interest in educational research in some topics; or other factors.

To provide a statistical context within which these issues can be examined and discussed, this paper presents a profile of the discipline as it is reflected in degree awards and the institutions which confer them. The resulting profile places education in the larger context of higher education disciplines; within the

discipline it identifies change, stability, and current status. It summarizes data on earned degrees from a variety of perspectives, assembling trend information on awards by level, recipients, specialties, and institutions. While not describing the entire active profession of educational researchers, it does consider a primary source of new entrants to the discipline and describes the environment within which much educational research is conducted. Furthermore, it could be argued that an important indicator of the condition of the discipline is its status within higher education. The presentation is intended to encourage debate and further consideration of the issues raised here in preliminary or speculative form.

Education Compared with Other Fields of Study

Of the 24 disciplines used to describe programs and degree awards in institutions of higher education, education ranks second as measured by numbers of bachelor's, master's and doctor's degrees combined.^{1/} With over 17 percent of the nearly 1,264,000 degrees awarded in 1980-81, education was exceeded by only business and management which accounted for 21 percent of the total. When graduate degrees alone (master's and doctor's) are considered, the predominance of education is striking. The discipline awarded 32 percent of all the graduate degrees, with the next-largest discipline, business and management, awarding 18 percent.

One of the notable trends in degree awards for the discipline has the effect of distinguishing it from other disciplines. By 1981, almost half (50 percent) of the degrees in education were awarded at the master's or doctor's levels. This

^{1/} First-professional degrees, including post-baccalaureate degrees in such subjects as medicine, law, and theology, were not included in these totals.

concentration of education degrees at the graduate levels increased over the period examined here; in 1971 it was 35 percent. The increase for education was much larger than for all degrees. Between 1971 and 1981, the proportion of higher education degrees at graduate levels for all disciplines combined rose only from 24 to 26 percent. This change could reflect a growing importance of graduate awards as credentials, or just the common practice of paying higher salaries to teachers who earn master's degrees, together with the drop in bachelor's degrees awarded due to the teacher surplus during the 1970's.

Only the discipline areas of law and library science (both small: total degrees in law were 2,668 and in library science 5,305 compared to education's 214,546) had higher proportions of degrees at the graduate level, 71 and 93 percent. The preponderance of graduate degrees in law exists even though first-professional awards in law (the typical law degree) were excluded from the calculations. For these two disciplines, post-baccalaureate degrees are virtually required of persons pursuing related occupations. Among the other large disciplines, proportions at the graduate level remained lower: business and management, 23 percent; social sciences, 13 percent; and engineering, 20 percent.

Table 1. Degree Awards in Education

Despite the fact that education constitutes a high proportion of all earned degrees, the trends in numbers of education degrees depart markedly from the trends for earned degrees generally. During the period under study here, 1971 through 1981, numbers of degrees awarded by institutions of higher education at each level for all disciplines combined showed increases, though the increases were greatest at the master's level, minimal at the doctor's level. At the same time, in education the number of bachelor's degrees declined, while the number of graduate awards increased.

The overall increase in bachelor's degrees, with degree awards over 11 percent higher in 1981 than in 1971, compares with a decline of almost 39 percent in bachelor's degrees in education for the same period (calculated from table 1 data). While graduate awards in education increased, they did so at different rates than did awards for all disciplines combined. At the master's level, the 11 percent increase in education for 1981 over 1971 was less than the 28 percent increase for all disciplines. At the doctor's level, increases in education far surpassed increases for all disciplines. The 3 percent overall increase was outstripped by a 23 percent increase in education.

An examination of the trends in the degree awards in education reveals different patterns at each level. The number of bachelor's degrees declined steadily during most of the period. The number of bachelor's degrees in education during the period reached its highest point in 1973 and has declined in absolute number each year since then. Master's degrees increased each year until 1976, and have declined since then. The time lag between receiving a bachelor's and master's

(3 to 5 years), could explain the increase in master's degrees that continued after bachelor's degrees had begun their sharp decline. Persons who already felt a commitment to the discipline (whether their first degree was in education or not) may have pursued graduate awards despite the decline at the bachelor's level. The pattern for doctor's degrees is less definitive, showing some fluctuation after reaching a high point in 1977.

Occurring simultaneously with shifts in the discipline that might be prompted by changing job markets or professional roles were major increases in the participation of women. The women's proportion of bachelor's degrees in education remained virtually unchanged during the period, between 72 and 75 percent. However, the proportions of master's and doctor's degrees in education that were earned by women increased, from 56 to 71 percent for master's, and from 21 to 47 percent for doctor's. The absolute numbers of degrees awarded to men at these two levels dropped, meaning that the increases in education degrees at these two levels were entirely due to the increase in awards to women.

The increasing participation of women in graduate level studies is not unique to education. By 1981, women earned half of all master's degrees and not quite a third of all doctor's degrees. Nevertheless women have continued to earn a higher proportion of education degrees than they have of all degrees.

Minority representation in graduate awards is greater in education than in all higher education disciplines combined (table 2). Consistently since 1977, when the current series of biennial collections of the race/ethnicity of degree

recipients was begun, education has awarded proportionally more degrees to minorities (who are United States citizens) than the average for all fields. In 1981, 13 percent of master's degrees in education were received by minorities, as were 12 percent of doctor's degrees. The margin of difference between education and all disciplines combined has been between 2 and 3 percent of all awards for the master's level, and over 3 percent at the doctor's level.

The greater popularity of education among minorities has been due exclusively to the higher percentages of blacks receiving awards in the discipline. The representation of blacks was considerably higher among the group of education recipients than among those receiving all awards. The greater popularity of education has accounted for a consistent difference of over 3 percentage points at the master's level, and over 4 percentage points at the doctor's level. In fact, for the three data collections reported, the two groups Asian or Pacific Islanders, and Nonresident aliens (who may be of any race/ethnicity but are counted separately), had proportions of education degree recipients that were less than their proportions of earned degrees in all fields.

The share of all graduate degrees in education earned by minorities has remained virtually constant since 1977. In fact, for the five years covered by the three data collections, the proportion of graduate degree awards in education made to U.S. minorities has changed less than a single percentage point, for either master's or doctor's degrees. By implication, total master's degrees awarded to minorities have dropped, while total doctor's degrees awarded have increased slightly.

Among the minority groups, blacks have comprised slightly less of the total graduate degrees in education at each level for successive data collections; Hispanics have increased at the master's level, declined at the doctor's level. Nonresident aliens have increased, especially as a proportion of doctor's degrees.

Education Specialty Areas

Only by examining changes in awards within education can some of the questions raised earlier be considered. Degree awards in education are reported according to 45 specialties, fourteen of which pertain to special education. The changes in the numbers of graduate level degrees in these specialties provide detailed information on changing emphases within the profession, in terms of both educational practice and research. The numbers of awards for 1971, 1976, and 1981 in each specialty, plus numbers of these awards earned by women, are shown in table 3.

It has already been noted that master's degrees play an important role in credentialing and certification. To consider the hypothesis that master's degrees reflect changing emphases in educational practice, one must first define the patterns of change. At the master's level, the largest numerical increase in a specialty occurred in special education, general, with 6,400 more degrees awarded in 1981 than in 1971. Within the subgroup of special education specialties, the increases in the various specialties brought total master's awards in special education to over 13,500 in 1981. The percentage change for master's awards in special education underscores this dramatic increase; special education has more than doubled, the increase being 123 percent since 1971.

Special education now ranks just below elementary education, which retained its place as the most popular education specialty despite a numeric decrease since 1971. Other large specialties at the master's level were student personnel, educational administration, and reading education. For two of these specialties, student personnel and educational administration, increases in master's awards to women had a significant impact on overall changes. Student personnel remained a large specialty, though it declined overall by 9 percent since 1971; the decline would have been greater except for the increase of 24 percent in awards to women. Education administration showed an increase only because the 155 percent increase in awards to women more than compensated for the 14 percent decrease in number of awards to men.

Specialties that might be thought to contribute newly qualified educational researchers to the profession have not constituted a large portion of master's degrees. In fact, the two specialties educational statistics and research, and testing, evaluation and measurement, together accounted for only three-tenths of one percent of master's degrees in education in 1971. By 1981, this already-low proportion dropped even further, to two-tenths of one percent due to an absolute decline in the two specialties combined.

Doctor's degrees are more likely to indicate shifts in research interest within the discipline, as well as growth to accommodate the need for instructors for master's level programs (see table 4).

Decreases in awards in some specialties were offset by large increases in others. An increase equal to about 42 percent of the increase in doctor's degrees is attributable to the educational administration specialty, often awarded to someone acting in an administrative capacity rather than to someone pursuing a research emphasis. When the next largest increase, that for curriculum and instruction, is added, an increase amounting to almost 59 percent of the total increase is accounted for. Four other specialties, when considered together, account for an additional 32 percent of the total increase. These specialties -- industrial arts, vocational and technical education; junior and community colleges; higher education; and adult and continuing education -- all suggest that education as lifelong learning and the means of facilitating the integration of work and education are receiving growing attention. It is less clear whether these degrees are being awarded to persons who intend to conduct research in these topics or who expect to act in administrative or managerial capacities. A third alternative, the simultaneous assumption of research and administrative duties, is also possible.

The changes in numbers of doctor's degrees have been less for specialties with a more traditional research emphasis or implication. Educational statistics and research, plus educational testing, evaluation, and measurement, together registered a drop in awards, 8 fewer in 1981 than in 1971. These two specialties accounted for only one percent of the total doctor's degrees in education. Educational psychology increased by 72 percent, a change that increased its proportion of doctor's degrees from 6 to almost 8 percent.

Institutional Characteristics

A shift in perspective to the numbers of institutions awarding graduate degrees at each level for each specialty provides a general indication of opportunities available for advanced study in the discipline. While not necessarily providing a comprehensive count of available programs (an institution may enroll students in a particular program but make no awards during a given year), the numbers suggest both lower bounds and comparative availability of particular programs.

The number of institutions awarding graduate degrees increased from 1971 to 1981. There were 577 institutions granting master's degrees in 1971; by 1981, 683 made awards; at the doctor's level, the number of institutions rose from 143 to 172. Those specialty areas already identified as the largest in the discipline were available at the largest numbers of institutions (table 5). Alternatively, it may be noted that comparatively few institutions offered graduate level degrees in some specialties. At the master's level there were 12 specialty areas in which fewer than 20 institutions made awards. At the doctor's level the same arbitrary cutoff yields a count of 27 specialties for which fewer than 20 institutions made awards. At least half of these specialties at each level were those in the detailed group of special education programs, however, where the large numbers of institutions offering degrees would suggest at least some access to programs providing expertise in special education.

While one aspect of opportunity for graduate study is the number of institutions offering particular programs, the size of graduate programs is another. The factor of size which carries both positive and negative connotations, is an important dimension to the context of graduate study. The 50 institutions

awarding the largest number of master's degrees, and the 50 awarding the largest number of doctor's degrees, are listed in tables 6 and 7. At the master's level, institutions awarding 374 or more degrees in 1981 ranked in the top 50, while at the doctor's level, institutions awarding 60 or more degrees were included.

An examination of the lists of institutions granting the largest numbers of degrees in 1981 reveals that membership in these groups of institutions has been transient. At the master's level, 20 institutions on the list in 1981 were not on the list in 1971. Four of these institutions awarded no master's degrees in education in 1971. Among the 10 institutions with the most master's awards in 1981, only 4 had been among the largest 10 in 1971. Three of those 4 schools were located in Michigan, the fourth in Illinois. The list of institutions awarding the largest number of doctor's degrees shows similar characteristics; 17 institutions on the list in 1981 were not on the list in 1971. One institution on the 1971 list did not award degrees and another did not provide a report. Among the 11 institutions with the most doctor's awards in 1981, only 5 had been among the top 11 in 1971.

To assess the concentration of awards in a group of institutions at any point in time, it is useful to calculate the proportions of degree awards at the graduate levels that have been granted by the larger institutions. When ranked institutions are grouped by 10's, some major distinctions can be observed in the concentrations of awards for master's and doctor's degrees.

Master's awards are distributed among a much larger number of institutions than doctor's, 683 vs. 172 in 1981, as has been observed already. The 10 institutions

with the highest number of master's awards gave 8 percent of the total awards in 1981, while the 10 institutions awarding the most doctor's degrees accounted for 20 percent of that total. The greater concentration of doctor's degrees than master's degrees holds at each group; the top 50 ranked institutions on the master's list awarded 35 percent of the degrees whereas the top 50 institutions on the doctor's list awarded 64 percent.

The change in the concentration of degree awards is different for master's and doctor's awards. At the master's level there has been little change in the proportion of master's degrees in education awarded by the highest 50 ranked institutions: 35 percent in both 1971 and 1981. However, the highest 10 institutions awarded a smaller proportion of the total in 1981 than they did in 1971, 8 percent compared with 12. For intermediate sized groups the pattern was reversed.

A much stronger tendency towards diversification of doctor's degrees has occurred. The proportion of all doctor's degrees in education awarded by the highest 10 ranked institutions dropped from 27 to 20, with the proportions for each ranked group decreasing between 1971 and 1981. In 1981 the top 50 institutions awarded 64 percent of the doctor's degrees compared to more than 72 percent in 1971.

Conclusion

On the basis of the data reviewed here, several conclusions can be drawn. First, education has been and remains a strong discipline at the graduate levels as characterized by both numbers and diversity in offerings and offerors. Some of this strength may result from a growing importance of graduate degrees as

credentials and salary incentives. The increase in master's degrees in the early 1970's, followed by a decline beginning in 1977, should be monitored closely; to ascertain whether it reflects changing customs in credentialling plus short term responsiveness to supply and demand for related professional positions, the drop in bachelor's degrees 3 to 5 years earlier (which in turn may reflect job shortages), or a more general shift of interest away from educational concerns.

The increased participation in graduate level study in the discipline by women is significant, accounting for growing proportions of graduate degrees. The participation of minorities in education has remained reasonably stable as a percent of total awards, though slight proportional declines have been noted. Participation of blacks has decreased, with the stability of the total minority representation deriving from changing representation of other groups.

The impact of degree awards on the amount and nature of educational research is not clear. There has been limited growth in specialties traditionally associated with research. However, if one were to assume that research interest was equally strong across all education specialties, especially at the doctor's level, one might expect growing research attention to be devoted to areas exhibiting substantial growth in educational programs -- special education, continuing education, and education administration.

Finally, the institutions awarding graduate degrees seem to share in the changing characteristics of the discipline. The group of institutions dominating the discipline insofar as numbers of degree awards is concerned is characterized by

changing membership over time. The expanding numbers of institutions making awards and the lessening concentration of awards at small numbers of institutions at the doctor's level are also apparent.

The questions raised by this review regarding the role of graduate degrees in education, the openness of the discipline to women and minorities, and the future of educational research, cannot be answered solely by reference to the statistics shown here. Both more focused studies and insights of persons in many different roles within the profession are needed to clarify the underlying bases for the phenomena reflected in these degree trends. The presentation of these initial results to this audience hopefully will stimulate discussion within the discipline about our directions, and goals, for the 1980's.

Data Source

Data presented here are based on annual collections from institutions of higher education by the Higher Education General Information Survey (HEGIS) of the National Center for Education Statistics, U.S. Department of Education. The survey universe consists of all institutional units that can be identified as accredited to offer degrees at the bachelor's and higher levels. In 1981, the universe of inquiry consisted of 1,909 colleges and universities. An institutional response rate of 99.84 percent was achieved with 1,906 institutions reporting. Since 1976, on a biennial basis, this survey has identified the race/ethnicity of degree recipients as a part of an expanded collection made in cooperation with the Office for Civil Rights. Information on characteristics of the survey, including a discussion of non-sampling errors and imputation techniques used for the small number of institutions not responding, is contained in the series of publications by NCES, Earned Degrees Conferred.

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Table 1 -- Earned Degrees Conferred in All Disciplines and in Education^{1/}, by Level, and to Female Recipients: School Year 1970-71 to 1980-81

School Year Ending	Both Sexes			Females		Percent of All Degrees Awarded to Females	Percent of Education Degrees Awarded to Females
	All Disciplines	Education Degrees	Education as a Percent of Total	All Disciplines	Education Degrees		
Bachelor's Degrees:							
1971....	839,730	176,614	21.0	364,136	131,520	43.4	74.5
1972....	887,273	191,220	21.6	386,683	141,683	43.6	74.1
1973....	922,362	194,229	21.1	404,171	142,788	43.8	73.5
1974....	945,776	185,225	19.6	418,463	136,065	44.2	73.5
1975....	922,933	167,015	18.1	418,092	122,458	45.3	73.3
1976....	925,746	154,807	16.7	420,821	112,737	45.5	72.8
1977....	919,549	143,722	15.6	424,004	103,781	46.1	72.2
1978....	921,204	136,141	14.8	433,857	98,657	47.1	72.5
1979....	921,390	126,109	13.7	444,046	92,290	48.2	73.2
1980....	929,417	118,169	12.7	455,806	87,247	49.0	73.8
1981....	935,140	108,309	11.6	465,257	81,233	49.8	75.0
Master's Degrees:							
1971....	230,509	88,952	38.6	92,363	49,975	40.1	56.2
1972....	251,633	92,143	39.0	102,083	56,327	40.6	61.1
1973....	263,371	105,565	40.1	108,903	61,437	41.3	58.2
1974....	277,033	112,610	40.6	119,191	67,486	43.0	59.9
1975....	292,450	120,169	41.1	130,880	74,748	44.8	62.2
1976....	311,771	128,417	41.2	144,523	82,621	46.4	64.3
1977....	317,164	126,825	40.0	149,381	83,537	47.1	65.9
1978....	311,620	119,038	38.2	150,408	80,625	48.3	67.7
1979....	301,079	111,995	37.2	147,709	76,852	49.1	68.6
1980....	298,081	103,951	34.9	147,332	72,931	49.4	70.2
1981....	295,739	98,938	33.5	148,696	70,682	50.3	71.4
Doctor's Degrees:							
1971....	32,107	6,403	19.9	4,577	1,358	14.3	21.2
1972....	33,363	7,044	21.1	5,273	1,660	15.8	23.6
1973....	34,777	7,318	21.0	6,206	1,814	17.8	24.8
1974....	33,816	7,293	21.6	6,451	1,977	19.1	27.1
1975....	34,083	7,446	21.9	7,266	2,299	21.3	30.9
1976....	34,064	7,778	22.8	7,797	2,599	22.9	33.4
1977....	33,232	7,963	24.0	8,090	2,774	24.3	34.8
1978....	32,131	7,595	23.6	8,473	2,956	26.4	38.9
1979....	32,730	7,736	23.6	9,189	3,264	28.1	42.2
1980....	32,615	7,941	24.3	9,672	3,522	29.7	44.4
1981....	32,958	7,900	24.0	10,247	3,736	31.1	47.3

1/ According to new classification, includes the former 0800 education category plus the former 1508 specialty, teaching of English as a foreign language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Earned Degrees Conferred, various years, and unpublished tabulations.

Table 2. -- Distribution of Earned Degrees Conferred in All Disciplines and in Education by Racial/Ethnic Group: 1976-77 to 1980-81

	Total	Black non- Hispanic	American Indian/ Alaskan Native	Asian or Pacific Islander	Hispanic	White, non- Hispanic	Non- resident Alien
Master's Degrees							
1976-77							
All fields	100.0	6.6	0.3	1.6	2.2	83.7	5.5
Education	100.0	10.0	0.4	0.8	2.4	84.6	1.9
1978-79							
All fields	100.0	6.4	0.3	1.8	2.1	82.8	6.4
Education	100.0	9.7	0.4	0.9	2.5	84.1	2.5
1980-81							
All fields	100.0	5.8	0.4	2.1	2.5	81.7	7.5
Education	100.0	8.8	0.5	1.0	3.1	84.0	2.7
Doctor's Degrees							
1976-77							
All fields	100.0	3.8	0.3	2.0	1.6	81.0	11.3
Education	100.0	8.6	0.4	1.0	2.1	83.2	4.8
1978-79							
All fields	100.0	3.9	0.3	2.5	1.4	80.0	12.0
Education	100.0	8.1	0.6	1.3	1.8	81.9	6.4
1980-81							
All fields	100.0	3.8	0.4	2.7	1.5	78.8	12.8
Education	100.0	7.8	0.7	1.3	1.8	80.9	7.5

NOTE: Details may not add to totals because of rounding

SOURCE: U.S. Department of Education Office for Civil Rights, Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and sex, Academic years 1976-77 and 1978-79 and unpublished tabulations.

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Table 3.--Master's Degrees Conferred in Education, by Level and Specialty: School Year 1970-71, 1975-76, and 1980-81

Specialty	Master's degrees, both sexes				Master's degrees, female			
	1971	1976	1981	Difference in number of awards, 1971 to 1981	1971	1976	1981	Difference in number of awards, 1971 to 1981
Education, total	86,952	128,417	98,938	9,986	49,975	82,621	70,682	20,707
Education, general	12,867	17,884	13,038	171	7,409	11,433	9,500	2,091
Elementary education, general ..	17,070	22,748	13,833	-3,237	13,947	19,396	12,296	-1,651
Secondary education, general ...	5,422	7,585	5,268	-154	2,485	4,146	3,272	787
Pre-elementary education	533	1	1,726	1,193	499	2,000	1,664	1,165
Junior high school education ...	134	105	146	12	67	39	103	36
Higher education, general	308	388	368	60	163	168	212	49
Junior and community college education	91	234	212	121	36	98	94	58
Adult and continuing education .	239	710	933	694	98	387	609	511
Special education,								
All specialties	6,068	13,632	13,537	7,469	4,497	11,070	11,678	7,181
Special education, general ...	3,051	7,692	9,482	6,431	2,206	6,233	8,145	5,939
Administration of special education	106	123	37	-69	66	98	25	-41
Education of the mentally retarded	935	1,299	463	-472	668	1,013	369	-299
Education of the gifted	28	6	99	71	21	6	89	68
Education of the deaf	208	404	356	148	168	312	308	140
Education of the culturally disadvantaged	115	151	52	63	61	107	42	-19
Education of the visually handicapped	97	98	114	17	72	67	80	8
Speech correction	572	711	495	77	494	617	461	33
Education of the emotionally disturbed	378	678	411	33	287	503	348	61
Remedial education	87	244	190	103	70	190	170	100
Special learning disabilities	179	1,790	1,507	1,328	342	1,554	1,370	1,228
Education of the physically handicapped	150	217	90	-60	118	170	68	-50
Education of the multiple handicapped	50	42	128	78	38	35	108	70
Education of exceptional children, not classified above	112	177	113	1	86	165	95	9

Table 3.--Master's Degrees Conferred in Education, by Level and Specialty: School Year 1970-71, 1975-76, and 1980-81 -- continued

Specialty	Master's degrees, both sexes				Master's degrees, female			
	1971	1976	1981	Difference in number of awards, 1971 to 1981	1971	1976	1981	Difference in number of awards, 1971 to 1981
Social foundations	534	624	333	-201	230	259	178	52
Educational psychology	1,286	2,356	2,225	939	674	1,391	1,517	843
Educational statistics and research	61	74	65	4	27	39	36	9
Educational testing, evaluation, and measurement	222	208	122	-100	116	128	90	26
Student personnel	13,335	17,396	12,200	-1,135	6,746	10,094	8,399	1,653
Educational administration	7,702	11,823	9,298	1,596	1,575	3,362	4,014	2,439
Educational supervision	707	1,207	1,260	553	374	700	717	343
Curriculum and instruction	2,261	3,967	3,700	1,439	1,374	2,610	2,714	1,340
Reading education	2,789	6,840	6,096	3,307	2,490	6,196	5,593	3,103
Art education	998	1,044	807	-191	564	753	631	-33
Music education	1,564	1,382	1,127	437	727	701	610	-117
Mathematics education	782	746	372	-410	353	411	233	-120
Science education	883	737	483	-400	343	316	238	-105
Physical education	4,410	4,761	4,219	-191	1,378	1,837	1,975	597
Driver and safety education	171	271	271	100	25	19	44	19
Health education	405	1,149	838	433	206	650	615	409
Business, commerce and distributive education	1,924	1,843	1,131	-793	1,147	1,303	908	239
Industrial arts, vocational and technical education	2,099	3,002	2,436	337	111	638	802	691
Agricultural education	447	342	233	214	21	16	45	24
Home economics education	802	762	412	390	725	747	400	325
Nursing education	330	327	60	-270	317	320	52	-265
Teaching English as a foreign language	236	469	557	321	158	332	381	223
Other	2,272	1,716	1,632	640	993	1,062	1,062	69

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According to new classification; includes the former 800 education category, plus the former 1508 specialty, teaching of English as a foreign language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Earned Degrees Conferred, selected years.

Table 4. --Doctor's Degrees Conferred in Education, by Level and Specialty: School Year 1970-71, 1975-76, and 1980-81 -- continued

Specialty	Doctor's degrees, both sexes				Doctor's degrees, female			
	1971	1976	1981	Difference in number of awards, 1971 to 1981	1971	1976	1981	Difference in number of awards, 1971 to 1981
Social foundations	129	177	173	44	31	58	70	39
Educational psychology	362	476	621	259	88	223	300	212
Educational statistics and research	58	38	63	5	13	13	32	19
Educational testing, evaluation, and measurement	30	28	17	-13	6	11	13	7
Student personnel	556	677	643	87	116	232	300	184
Educational administration	957	1,497	1,593	636	82	293	616	534
Educational supervision	71	107	104	33	9	25	45	36
Curriculum and instruction	458	654	699	241	117	282	361	244
Reading education	61	117	151	90	30	87	118	88
Art education	53	48	55	2	16	25	31	15
Music education	109	80	68	-41	14	25	28	14
Mathematics education	49	55	30	-19	15	20	12	-3
Science education	91	57	79	-12	15	15	28	13
Physical education	283	215	222	-61	69	60	83	14
Driver and safety education	2	4	5	3	1	2	0	-1
Health education	51	72	82	31	8	27	48	40
Business, commerce and distributive education	82	66	41	-41	26	21	13	-13
Industrial arts, vocational and technical education	106	231	265	159	6	50	91	85
Agricultural education	43	37	22	-21	1	1	9	8
Home economics education	28	25	7	-21	27	24	7	-20
Nursing education	28	60	7	-21	27	22	2	-25
Teaching English as a foreign language	5	9	0	-5	3	6	0	-3
Other	219	60	180	-39	43	22	74	-31

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According to new classification; includes the former 800 education category, plus the former 1508 specialty, teaching of English as a foreign language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Earned Degrees Conferred, selected years.

Table 4.--Doctor's Degrees Conferred in Education, by Level and Specialty: School Year 1970-71, 1975-76, and 1980-81

Specialty	Doctor's degrees, both sexes				Doctor's degrees, female			
	1971	1976	1981	Difference in number of awards, 1971 to 1981	1971	1976	1981	Difference in number of awards, 1971 to 1981
Education, total	6,403	7,801	7,900	1,497	1,355	2,586	3,736	2,381
Education, general	1,598	1,497	1,394	-204	326	507	720	394
Elementary education, general ..	219	196	224	5	103	121	157	54
Secondary education, general ...	212	210	169	-43	42	67	83	41
Pre-elementary education	9	13	46	37	7	9	31	24
Junior high school education ...	2	0	9	7	1	0	5	4
Higher education, general	274	345	376	102	41	94	158	117
Junior and community college education	6	220	126	120	1	63	57	56
Adult and continuing education .	45	119	136	91	10	42	69	59
Special education,								
All specialties	207	311	293	86	64	139	175	111
Special education, general ...	114	208	207	93	37	89	130	93
Administration of special education	9	17	18	9	3	7	5	2
Education of the mentally retarded	18	35	4	-14	5	17	2	-3
Education of the gifted	0	0	1	1	0	0	1	1
Education of the deaf	4	4	3	-1	2	3	2	0
Education of the culturally disadvantaged	0	11	0	0	0	5	0	0
Education of the visually handicapped	2	3	1	-1	1	2	1	0
Speech correction	40	9	5	-35	10	2	4	-6
Education of the emotionally disturbed	14	5	5	-9	5	1	3	-2
Remedial education	0	5	3	3	0	1	1	1
Special learning disabilities	2	6	27	25	0	5	16	16
Education of the physically handicapped	0	5	3	3	0	4	3	3
Education of the multiple handicapped	0	0	5	5	0	0	2	2
Education of exceptional children, not classified above	4	3	11	7	1	3	5	4

Table 5. -- Number of Institutions Awarding Graduate Level Degrees in Education,
by Specialty: 1980-81

Education Specialty	Number	
	Master's	Doctor's
Education, total.....	683	172
Education, general.....	278	71
Elementary education, general.....	401	38
Secondary education, general.....	236	31
Pre-elementary education.....	103	11
Junior high school education.....	16	1
Higher education, general.....	36	13
Junior and community college education.....	44	32
Adult and continuing education.....	78	22
Special education, all specialties		
Special education, general.....	274	48
Administration of special education.....	6	3
Education of the mentally retarded.....	59	1
Education of the gifted.....	16	1
Education of the deaf.....	30	2
Education of the culturally disadvantaged.....	11	0
Education of the visually handicapped.....	10	2
Speech correction.....	40	5
Education of the emotionally disturbed.....	42	3
Remedial education.....	7	1
Special learning disabilities.....	85	5
Education of the physically handicapped.....	11	2
Education of the multiple handicapped.....	15	1
Education of the exceptional children, not classified above.....	11	2
Social foundations.....	53	44
Educational psychology.....	163	72
Educational statistics and research.....	23	22
Educational testing, evaluation, and measurement...	19	6
Student personnel.....	482	87
Education administration.....	336	120
Education supervision.....	80	15
Curriculum and instruction.....	133	77
Reading education.....	214	35
Art education.....	130	12
Music education.....	160	27
Mathematics education.....	87	16
Science education.....	112	24
Physical education.....	281	39
Driver and safety education.....	17	2
Health education.....	83	14
Business, commerce, and distributive education.....	147	9
Industrial arts, vocational and technical education	149	34
Agriculture education.....	33	9
Home economics education.....	54	2
Nursing education.....	7	1
Teaching English as a foreign language.....	33	0
Other.....	94	19

SOURCE: U.S. Department of Education, National Center for Education Statistics,
Higher Education General Information Survey, unpublished tabulations.

Table 6. -- Fifty Institutions of Higher Education Awarding the Largest Numbers of Master's Degrees in Education: 1980-81

State and Institution		Rank in 1971	Number of Degrees			Rank In 1981
			Total	Male	Female	
AL	U of Alabama in Birmingham	*	526	74	452	20
AZ	Arizona State University	22	388	122	266	46.5
AZ	University of Arizona	40	490	149	341	26
AZ	University of Phoenix	-	398	99	299	41
CA	Cal State U Los Angeles	39	458	101	357	28
CA	San Diego State University	*	374	112	262	50
CO	U of Northern Colorado	19	828	264	564	5
CT	Central Conn St College	52	396	106	290	42.5
CT	Southern Conn St College	27	704	188	516	8
FL	Nova University	-	954	240	714	1
FL	U of Southern Florida	*	493	147	346	25
GA	Georgia State University	*	876	187	689	4
GA	University of Georgia	4	453	144	309	31.5
IL	Northern Ill University	10	747	240	507	6
IL	U of Ill Urbana Campus	15	419	149	270	35
IN	Ball State University	8	665	220	445	11
IN	Indiana State U Main Campus	24	409	148	261	39
IN	Indiana U Bloomington	1	609	225	384	14
IN	Ind-Purdue U Indianapolis	-	413	76	337	37
KY	University of Louisville	*	386	57	329	48
KY	Western KY University	55.5	498	126	372	24
MA	Lesley College	*	390	46	344	45
MI	Central Mich University	42	484	251	233	27
MI	Eastern Mich University	2	917	284	633	2
MI	Michigan State University	3	910	293	617	3
MI	Oakland University	*	456	66	390	30
MI	U Michigan-Ann Arbor	14	442	120	322	33.5
MI	Wayne State University	6	731	184	547	7
MI	Western Mich University	18	603	213	390	15
MS	Mississippi St University	*	396	116	280	42.5
NJ	Kean College of New Jersey	-	388	97	291	46.5
NY	Adelphi University	29	637	98	539	12
NY	Columbia Teachers College	7	585	183	402	17
NY	Long Is U CW Post Center	57.5	672	134	538	9
NY	New York University	5	510	127	383	22

Table 6. -- Fifty Institutions of Higher Education Awarding the Largest Numbers of Master's Degrees in Education: 1980-81 -- continued

State and Institution	Rank in 1971	Number of Degrees			Rank In 1981
		Total	Male	Female	
NY SUNY College at Buffalo	30	376	79	297	49
NC East Carolina University	*	457	132	325	29
OH Antioch University	*	549	175	374	18
OH Bowling Green St U Main Cam	*	417	167	250	36
OH Kent State U Main Campus	28	410	137	273	38
OH Ohio State U Main Campus	32	667	150	517	10
OR U of Oregon Main Campus	21	401	148	253	40
PA Temple University	11	623	233	390	13
PA U of Pittsbg Main Campus	9	442	136	306	33.5
SC U of SC at Columbia	*	508	92	416	23
TN Memphis State University	31	453	87	366	31.5
TN U of Tennessee Knoxville	*	524	133	391	21
TX East Texas St University	62	599	155	444	16
TX Nort Texas St University	41	393	103	290	44
WV West Virginia University	35	528	194	334	19

* Rank lower than 65

- No degrees in 1971

SOURCE: U.S. Department of Education, National Center for Education Statistics,
Higher Education General Information Survey, unpublished tabulations.

Table 7.-- Fifty Institutions of Higher Education Awarding the Largest Number of Doctor's Degrees in Education: 1980-81

State and Institution	Rank in 1971	Number of Degrees			Rank in 1981
		Total	Male	Female	
AL University of Alabama	30	70	38	32	37
AZ Arizona State University	25	66	28	38	42
CA Stanford University	34	75	37	38	35
CA U of Cal-Los Angeles	22	62	24	38	47
CA U of Southern California	5	150	89	61	5
CO U of Colorado at Boulder	*	62	32	30	47
CO U of Northern Colorado	10	100	71	29	22
FL Nova University	*	273	172	101	1
FL Florida State University	9	145	78	67	7
FL University of Florida	15	99	49	50	23
FL University of Sarasota	-	84	56	28	29
GA University of Georgia	16	90	53	37	27
IL Northern Ill University	*	78	48	30	33.5
IL Stn Illinois U Carbondale	38	69	42	27	38.5
IL U of Ill Urbana Campus	8	129	71	58	12
IN Indiana U Bloomington	1	131	78	53	10.5
IA University of Iowa	17	93	49	44	24
MD U of Md College Park Campus	19	147	60	87	6
MA Boston University	26	131	66	65	10.5
MA Harvard University	31	67	29	38	41
MA U of Mass Amherst Campus	32	114	65	49	17
MI Michigan State University	2	156	96	60	4
MI U Michigan-Ann Arbor	7	120	61	59	15.5
MI Wayne State University	18	63	28	35	45
MN U of Minn Mnpls Snt Paul	14	103	52	51	20
MO Saint Louis U Main Campus	*	62	31	31	47
MO U of Missouri-Columbia	28	91	63	28	25.5
NB U of Nebraska-Lincoln	23	74	44	30	36
NJ Rutgers U New Brunswick	43	121	68	53	14
NY Columbia U Tchrs College	4	164	66	98	2
NY Fordham University	*	64	32	32	44
NY New York University	11	91	47	44	25.5
NY SUNY at Buffalo Main Campus	24	65	39	26	43
OH Kent State U Main Campus	*	110	44	66	18
OH Ohio State U Main Campus	20	157	73	84	3

Table 7.-- Fifty Institutions of Higher Education Awarding the Largest Number of Doctor's Degrees in Education: 1980-81 -- Continued.

State and Institution		Rank in 1971	Number of Degrees			Rank in 1981
			Total	Male	Female	
OK	Okla State U Main Campus	20	82	56	26	30
OR	U of Oregon Main Campus	29	89	50	39	28
PA	Pa State U Main Campus	12	126	82	44	13
PA	Temple University	35	120	69	51	15.5
PA	U of Pennsylvania	*	60	22	38	50
PA	U of Pittsbg Main Campus	13	144	73	71	8
SC	U of SC at Columbia	*	69	33	36	38.5
TN	U of Tennessee Knoxville	36	61	37	24	49
TN	Vanderbilt University	-	138	65	73	9
TX	East Texas St University	*	79	52	27	32
TX	North Texas St University	39	68	39	29	40
TX	U of Texas at Austin	21	101	48	53	21
UT	Brigham Young U Main Campus	*	78	56	22	33.5
VA	U of Virginia Main Campus	37	80	37	43	31
WI	U of Wisconsin Madison	6	107	53	54	19

* Rank lower than 50

- No degrees or no report in 1971

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, unpublished tabulations.

Table 8. -- Concentration of Master's and Doctor's Degree Awards in Education by Size Rank of Institutions: 1970-71 and 1980-81

Groups of Institutions	1970-71	1980-81
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	Number	
Master's degrees in education, all institutions	88,952	98,938
Institutions ranked by number of awards		
	Percent of awards	
Highest 10	11.7	8.1
Highest 20	19.5	22.2
Highest 30	25.3	27.1
Highest 40	30.4	31.4
Highest 50	35.1	35.3
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	Number	
Doctor's degrees in education, all institutions	6,403	7,900
Institutions ranked by number of awards		
	Percent of awards	
Highest 10	27.2	20.3
Highest 20	42.6	35.3
Highest 30	55.1	46.9
Highest 40	64.9	56.3
Highest 50	72.5	64.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, unpublished tabulations.